

X-RAY GENERATOR AND SLIP RING FOR A CT SYSTEM

Abstract

The present invention is directed to an apparatus for supplying power to a rotatable x-ray tube for generation of an x-ray beam for acquisition of CT data. The apparatus includes a slip ring to transfer power from a stationary inverter to a rotatable HV tank. The HV tank conditions the transferred power and creates a voltage potential across the x-ray tube for x-ray generation. The inverter has a single or pair of series resonant circuits connected either directly to the slip ring or indirectly through a transformer to limit frequency content and reduce common-mode component of the voltage and current waveforms carried by the slip ring as well as reduce power losses.